

**CITY OF BALTIMORE  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF SOLID WASTE**



**TEN YEAR SOLID WASTE MANAGEMENT PLAN  
JULY 2002**

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**TEN YEAR SOLID WASTE MANAGEMENT PLAN  
JULY 2002**



***INTRODUCTION***



## **INTRODUCTION**

### **STATEMENT OF PURPOSE**

The purpose of this Ten Year Solid Waste Management Plan is two-fold. One purpose is to provide the citizens of Baltimore with a description of the City's current and future solid waste management system. The second purpose is to comply with Maryland regulations. This plan is an update to the Solid Waste Management Plan that was adopted by the Baltimore City Council on March 7, 1995. The 1995 Plan, as is this update, was prepared in accordance with current state planning regulations (Code of Maryland Regulations, Title 26, Chapter 03, Part 03, or COMAR 26.03.03).

The Ten Year Solid Waste Management Plan is divided into five chapters. The first chapter presents the legal and institutional framework for our waste management system, including City goals and objectives. Chapter 2 presents demographic and land use information for the City. Chapter 3 provides waste generation data as well as estimates for waste generation and characterization. It also provides information on current waste management facilities in the City. Chapter 4 assesses and evaluates the operation of our current system and its future potential. Chapter 5 presents a plan of action to be implemented by the City to achieve its solid waste management goals.

### **PLAN APPROVAL PROCESS**

The Bureau of Solid Waste, a unit of the Baltimore City Department of Public Works, prepared this Plan. Affected agencies inside the Department of Public Works, most notably the Office of Recycling and the Bureau of Water and Waste Water, provided input and reviewed the information contained in the plan. There were many other contributors to this plan, including the Baltimore City Department of Planning, Northeast Maryland Waste Disposal Authority, and neighboring Counties. As this is an update of an existing plan, comments from the Maryland Department of the Environment (MDE) were addressed, as requested. A draft version of the Plan was submitted to MDE for preliminary review prior to developing the final Plan. A final draft of the plan was prepared and submitted to the Baltimore City Council, followed by a series of public hearings.

Comments received at the public hearings were addressed and incorporated into the final plan, as appropriate. Comments received during the approval process for the 1995 version of the Plan

were also addressed in this update. The final plan was approved by the City Council on \_\_\_\_\_, 2003. The approval resolution from the City Council is included in Appendix E.

## **CERTIFICATION**

Through its approval by the Baltimore City Council, this Plan is certified to be in compliance with all City planning and zoning requirements. The Planning Commission recommendation to the City Council is included in Appendix E.

**CITY OF BALTIMORE  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF SOLID WASTE**

**TEN YEAR SOLID WASTE MANAGEMENT PLAN  
JULY 2002**



***EXECUTIVE SUMMARY***





***EXECUTIVE SUMMARY***

**INTRODUCTION**

The purpose of the Ten Year Solid Waste Management Plan is to provide citizens with a description of the City's solid waste management system, as required by State law. Readers of the plan will become familiar with the City's accomplishments and goals regarding solid waste management.

**GOAL FOR SOLID WASTE MANAGEMENT:**

The City's goal for solid waste management is to protect the public health, safety, and welfare through the provision of comprehensive trash collection, recycling, City-wide cleaning and solid waste disposal in accordance with the mandates of the City, State and Federal governments.

**ACHIEVING THE GOAL**

In proceeding toward this goal, the City has made a commitment to pursue an aggressive, yet environmentally sound strategy of integrated solid waste management utilizing waste reduction, recycling, composting, waste-to-energy incineration, and landfilling. This strategy includes many of the following elements:

- Practice and promote waste reduction and waste prevention behaviors;
- Maximize the collection and processing of recycling materials, including yard waste;
- Expand educational and community outreach programs;
- Expand the role of sanitation enforcement efforts;
- Utilize performance measurement (CITISTAT) to monitor quality of service;
- Recover energy from and reduce the volume of combustibles;
- Evaluate and implement new technologies to increase efficiency of existing programs;
- Evaluate and improve the routing component of the City's solid waste disposal system;
- Utilize Capital Improvement projects to build and update facilities;
- Identify ways to prolong the life of the Quarantine Road Sanitary Landfill (QRSL);
- Monitor legislation as it is related to the impact of the Solid Waste Plan.

Integrated waste management, which utilizes source reduction and recycling, incineration and landfilling, was recommended in the U. S. Environmental Protection Agency's (EPA) 1989 Agenda for Action. This agenda was developed to guide the nation in responding to the "solid waste disposal crisis" that resulted from increased waste generation and decreased landfill capacity. The EPA concerns were that landfill capacity would be insufficient to meet disposal needs due to existing landfills reaching capacities, as the siting procedures for new facilities were becoming more difficult.

To address the disposal crisis, the EPA recommended not only that source reduction and recycling be increased, but also incineration and landfilling be utilized at facilities that meet Federal and State regulations. Only through an integrated approach could the country's disposal capacity be brought into line with its disposal needs.

However, the last five years have seen an overall increase in the construction of very large landfills or "mega-fills" in the United States, that are accepting material at relatively low tipping fees. There are circumstances in which landfilling of certain recyclable materials is more cost-effective than the process involved in the re-use of the material.

It is also important to recognize that no one knows about solid waste management options that may present themselves over the next ten years, just as ten years ago the use of "mega-fills" was not a feasible option. Both incineration and landfilling are subject to increasingly more stringent health and environmental regulations. The viability and acceptability of both these disposal methods as long term solutions to solid waste disposal has been weakened by emerging medical and environmental information about the impacts of incineration and landfilling. The cost to protect public health and the environment from the consequences of traditional waste disposal methods has increased dramatically and is expected to increase in the future. All this while City government struggles with a steadily declining tax base and revenue flow.

Alternatives to incineration and landfilling are relatively new and their success is not guaranteed. For example, solid waste composting may not be economically viable, nor be able to produce saleable material. In addition, the environmental health impacts of solid waste composting are not fully known. The recycling industry's track record has been analyzed both optimistically and pessimistically with varying opinions as to its growth potential. The major benefit of an integrated solid waste management strategy is the pursuit of a range of options without relying on any single method.

Although this change in disposal strategy has permeated the solid waste management establishment, the City believes its integrated waste management strategy will be utilized successfully over the next ten years, with few modifications. The agreement with Baltimore Resource Energy Systems Company (BRESKO) for the disposal of wastes at its waste-to-energy facility and the available capacity at the Quarantine Road Sanitary Landfill ensure a solid foundation for solid waste management in the City by the City for the period covered by this plan. The City's recent emphasis has been and will continue to be directed at the waste reduction and recycling aspects of this strategy. The following sections will describe how these goals will be achieved.

## **WASTE REDUCTION AND RECYCLING**

- Develop, promote, and monitor a Waste Reduction Program.
- Continue the educational strategy to assist citizens and businesses in practicing waste reduction.
- Investigate and develop new aspects of the recycling program to expand yard waste collection.
- Expand the participation base in the recycling program to include more institutions (schools, City offices and businesses, places of worship).
- Encourage multi-family dwellings and public housing units to provide recycling facilities for tenants or residents.
- Continue an aggressive recycling education campaign.
- Continue the City's Recycling Program, which is expected to have a significant impact in diverting valuable materials from the solid waste stream. The City plans to increase recovery of the residential recycling waste it collects from 12 percent in 1996 to 25 percent in 2008.

## **COLLECTIONS**

The Bureau of Solid Waste's Collections Division is responsible for all trash collection and cleaning services provided by the City. Its Routine Services Section is responsible for residential mixed refuse collection services as well as Business District, lot, street and alley cleaning. Its Special Services Section is responsible for Citywide recycling; waterway cleaning; and the collecting and cleaning of residential bulk, leaves, graffiti, eviction chattel, and fire debris. This division is also charged with collection from condominiums, rat eradication, and the support and coordination for community clean-ups

City crews currently collect approximately 500,000 tons of debris and recycling from households and small businesses each year. To maintain effective household collection services, and to keep the City clean, Baltimore plans to:

- Improve customer service and quality control regarding the collection of mixed refuse and recycling materials.
- Evaluate and implement new technology, such as Geographical Information System (GIS) tracking system and high density load packers.
- Conduct a complete assessment of routes in the City and implement modifications where needed and where feasible.
- Update and improve maintenance of waste collection vehicles.

- Continue working with all City agencies and community groups to educate the public on using the proper method of disposing of debris and keeping communities clean.
- Continue to evaluate and use specialized equipment, which will allow employees to maximize productivity, while minimizing man power.
- Continue the use of seasonal workers to address special events such as park cleaning, parades, City festivals, snow removal, community clean-ups and leaf collection during specified times of each year.
- Expand support for communities' participation in community clean-ups.
- Solicit support to relieve the City from the responsibility of removing and/or storing eviction chattel.

## **MATERIALS RECOVERY**

Once the waste is collected, the next objective is to reduce the volume of material requiring disposal. The City's system relies mainly on contracts with private businesses to process the recycling material. Contracts are already in place to handle office paper, "white goods", (such as discarded refrigerators and stoves), mixed household paper, commingled (plastic, metal, and glass containers from households) and tires. To provide increased processing of recycling materials, the City plans to:

- Continue to work with the Baltimore Development Corporation (BDC) and Empower Baltimore to retain and attract recycling businesses. Develop an Eco-Industrial Park with recycling businesses as part of the City's empowerment strategy.
- Monitor the recovered materials markets and support regional and State efforts to expand these markets.
- Investigate the development of a comprehensive composting plan and continue a wood waste chipping operation.
- Support regional recycling of residential and commercial waste through advertising.
- Increase Maryland Recycling Act materials counted in the State report, to include such materials as composted, sewage sludge, and construction and demolition debris (C&D).

## **ENERGY RECOVERY**

BRESCO plays a key role in the City's integrated solid waste management strategy. This facility reduces the volume of waste that must be landfilled by approximately 75 percent. Increasingly stringent environmental controls by the Federal and State governments mandate that this facility does not threaten public health.

Approximately 280,000 tons of City-collected waste is processed annually at the BRESCO plant under a long-term contract. The City expects to continue using BRESCO for the next ten years as a means of reducing dependence on fossil fuel for steam and electricity production while minimizing the amount of waste that must be landfilled. The City has recently completed its negotiations, extending the contract with BRESCO through 2011.

## **LANDFILL DISPOSAL**

The Quarantine Road Landfill (QRSL) remains an essential component of the City's integrated waste management strategy since non-processible waste and residue require a safe landfill for disposal. The QRSL has a conservative, projected life until 2019. The City plans to:

- Conduct a feasibility study for siting and building a new landfill to meet the City's and region's future landfill needs
- Construct Cell 6 Phase II, based on new life span data for the QRSL.
- Evaluate and utilize new technologies designed to prolong the landfill life.
- Monitor and respond to new developments regarding disposal of incinerator ash.
- Implement programs to assure conformance with maintenance-oriented requirements of the landfill.
- Evaluate leachate management and the possible utilization of landfill gas as an energy source.
- Assess the feasibility of expanding the Pennington Avenue Landfill, in coordination with Anne Arundel County.
- Monitor and respond to new State and Federal regulations.

## **OUTLOOK FOR THE FUTURE**

The outlook for solid waste management in the City of Baltimore over the next ten years is positive. Adequate capacity exists at QRSL and BRESKO to accommodate current and projected levels of waste generation. It should be recognized that changes are occurring rapidly in the solid waste industry and that this Plan will require continuous review and updating at three year intervals.

The City of Baltimore has moved assertively to assure adequate landfill capacity, to develop a regional waste-to-energy facility, and to establish comprehensive recycling collection for all City households. The elements of this Plan ensure that the City is fully prepared for the solid waste challenges of the next ten years.